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Congress of the United States
House of Representatives
Committee on Appropriations
Washington, DC 20515-6015

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CLERK AND STAFF DIRECTOR
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March 13, 2019

The Honorable Ajit Pai
Chairman
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

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Dear Chairman Pai:

We write to respectfully request a delay in the commencement of bidding for 24 GHz spectrum licenses in Auction 102, which is scheduled for March 14, 2019. This delay is necessary to allow for further review of potential interference to adjacent band uses that are critical for national security as well as the protection of American lives and property. In particular, the National Oceanic and Atmospheric Administration (NOAA) uses the 23.6-24 GHz spectrum band for microwave sensor-based remote sensing of atmospheric levels of water vapor, which is the single most impactful data stream for accurately forecasting weather. This data is used by NOAA's National Weather Service, the National Aeronautics and Space Administration (NASA), and the Department of Defense (DOD), in addition to the broader international weather community. Without this data, the Nation's forecasting capacity would be reduced to the accuracy of the forecasts produced in the 1970s. For example, the forecast for Superstorm Sandy would have predicted landfall in Maine 24 hours later than actual landfall occurred in New Jersey, roughly 300 miles away.¹ This would have further imperiled millions of Americans.

The National Weather Service and others in the international weather community require an extremely high level of data fidelity and connectivity. Additionally, NOAA's use of this spectrum for passive sensing of environmental conditions makes their signals uniquely susceptible to interference from man-made emissions. We understand that the emission limits for 24 GHz licenses remain on open item for discussion at the upcoming World Radio Conference. We believe that there is significant risk that aggregate 5G signals under the current FCC rules for this band will mask natural radiation that provides important inputs for weather forecasting that cannot be obtained by other methods.

¹ McNally, Tony & Bonavita, Massimo & Thépaut, J.-N. (2014). The Role of Satellite Data in the Forecasting of Hurricane Sandy. Monthly Weather Review. 142. 634-646. 10.1175/MWR-D-13-00170.1.

As appropriators, we are highly concerned about the potential impact on the federal investment of billions of dollars in our satellite fleet, which is designed to support our defense apparatus and to provide lifesaving weather data. Therefore, we request that prior to commencing the auction, you:

1. Provide to the Committee any analysis, including any engineering data, that supports the current power, emission, and other protective limits for 24 GHz licenses to be auctioned, and any analysis that evaluates the impact on adjacent services, particularly in 23.6-24 GHz band.
2. Provide all correspondence regarding power, emission, and other protective limits involving the Federal Communication Commission (FCC) and any of these organizations: National Telecommunications and Information Administration (NTIA), NOAA, NASA, Department of Commerce (DOC), DOD, or White House organizations as cited in the February 28th letter (National Economic Council, Officer of Science and Technology Policy, and National Security Council).
3. Continue to work with NTIA and Federal agencies, including via the Interdepartment Radio Advisory Committee, to update current emissions, power, or other protective limits to ensure that they fully protect adjacent services, are supported by Federal agencies, and align with the international community.

We additionally request that, after any such auction concludes and licensees begin operations, you commit to providing robust oversight and enforcement of any emissions that cause interference to critical weather data streams to ensure that these systems continue to operate unabated and unadulterated, including creating mechanisms for responding timely to mitigate any reports of interference.

To be clear, we fully support development of 5G technology and agree with the Administration that it is imperative that our Nation lead the world in its deployment. However, any support provided to this new technology must be weighed against the cost to other priorities, including national security and the safety of Americans' lives and property.

We hope to work collaboratively with you and the other relevant agencies to find a mutually beneficial solution.

Respectfully,



Chairman Mike Quigley
Subcommittee on Financial Services
and General Government
Committee on Appropriations



Chairman Peter J. Visclosky
Subcommittee on Defense
Committee on Appropriations



Chairman José E. Serrano
Subcommittee on Commerce, Justice,
Science, and Related Agencies
Committee on Appropriations



FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF
THE CHAIRMAN

April 2, 2019

The Honorable Peter J. Visclosky
Chairman
Subcommittee on Defense
Committee on Appropriations
U.S. House of Representatives
H-405 The Capitol Building
Washington, DC 20515

Dear Chairman Visclosky:

Thank you for your letter regarding the Commission's 24 GHz auction (Auction 102). Auction 102 began on March 14 and is ongoing with more than \$1.7 billion in gross proceeds so far. This auction will make available 700 megahertz of spectrum in the 24.25-24.45 GHz and 24.75-25.25 GHz bands for commercial 5G services and applications. I share the support you expressed in your letter for United States leadership in the deployment of 5G, the next generation of wireless connectivity, and the auction of 24 GHz spectrum is critical to that leadership.

The FCC proposed to open up the 24 GHz band for mobile terrestrial use in 2016 and adopted the service rules for the 24 GHz band in 2017. In developing these rules, we followed the standard interagency coordination process. On April 26, 2018, in my written testimony before the Subcommittee on Financial Services and General Government, I indicated that we planned to move ahead with auctioning the 24 GHz band soon. And then, on August 3, 2018, the Commission adopted the final procedures for Auction 102. In short, the service rules for the 24 GHz band and the procedures for Auction 102 have been public for a long time and were developed through a notice-and-comment process. Moreover, the Commission devoted substantial funds and staff resources to prepare for this auction.

Based on the record compiled by the Commission in a notice-and-comment rulemaking, the FCC concluded that these rules would protect the 23.6-24 GHz band from interference. The rules are consistent with previous Commission actions in the same range of spectrum. In 2000, the FCC established rules for operation in the 24.25-24.45 GHz and 25.05-25.25 GHz bands for a high-density fixed and point-to-multipoint wireless broadband service that was later auctioned in 2004 with the same out-of-band emission limits to protect passive services from harmful interference. Below 23.6 GHz, similar out-of-band emission limits were established to protect passive service operations from high-powered fixed service operations. Moreover, federal operations in the spectrum adjacent to the passive service allocation must comply with the same non-federal protection limits, as adopted in the NTIA manual. Since these rules were adopted, we have not been presented with any evidence of harmful interference from these existing services, or a validated study suggesting that operations in accordance with these rules would adversely affect use of the 23.6-24 GHz allocation, including for weather forecasting. The

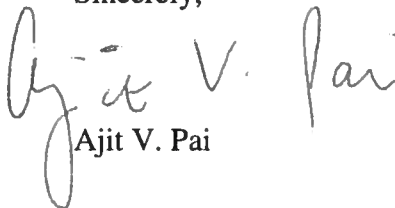
Commission's decisions with respect to spectrum have been and will continue to be based on sound science rather than exaggerated and unverified last-minute assertions.

For these reasons, among others, I did not believe that the Commission should delay the March 14 auction the day before it was to commence. Such a delay would not have been fair to those bidders that had prepared to participate in the auction. Such a delay would have sent a message that the United States was not fully committed to leading the world in 5G. And most important, such a delay would have been unjustified.

Your letter also requested a broad range of material and information, much of which is readily available in the public record of the proceeding. We have a transparent rulemaking process and maintain documents in our online Electronic Comment Filing System. Also, each auction has its individual webpage; in this case, that page is located at <https://www.fcc.gov/auction/102>. I have directed my staff to assist yours in accessing this material online for review and to provide any other assistance that you need related to the Commission's spectrum work.

I stand ready to testify concerning these decisions at the April 3 hearing, and I am quite confident that the FCC has complied with all appropriate processes related to this matter.

Sincerely,

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Ajit V. Pai



FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF
THE CHAIRMAN

April 2, 2019

The Honorable Jose E. Serrano
Chairman
Subcommittee on Commerce, Justice, Science, and Related Agencies
Committee on Appropriations
U.S. House of Representatives
H-310 The Capitol Building
Washington, DC 20515

Dear Chairman Serrano:

Thank you for your letter regarding the Commission's 24 GHz auction (Auction 102). Auction 102 began on March 14 and is ongoing with more than \$1.7 billion in gross proceeds so far. This auction will make available 700 megahertz of spectrum in the 24.25-24.45 GHz and 24.75-25.25 GHz bands for commercial 5G services and applications. I share the support you expressed in your letter for United States leadership in the deployment of 5G, the next generation of wireless connectivity, and the auction of 24 GHz spectrum is critical to that leadership.

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Based on the record compiled by the Commission in a notice-and-comment rulemaking, the FCC concluded that these rules would protect the 23.6-24 GHz band from interference. The rules are consistent with previous Commission actions in the same range of spectrum. In 2000, the FCC established rules for operation in the 24.25-24.45 GHz and 25.05-25.25 GHz bands for a high-density fixed and point-to-multipoint wireless broadband service that was later auctioned in 2004 with the same out-of-band emission limits to protect passive services from harmful interference. Below 23.6 GHz, similar out-of-band emission limits were established to protect passive service operations from high-powered fixed service operations. Moreover, federal operations in the spectrum adjacent to the passive service allocation must comply with the same non-federal protection limits, as adopted in the NTIA manual. Since these rules were adopted, we have not been presented with any evidence of harmful interference from these existing services, or a validated study suggesting that operations in accordance with these rules would adversely affect use of the 23.6-24 GHz allocation, including for weather forecasting. The

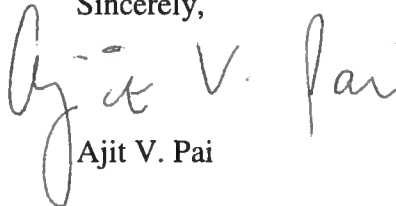
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Your letter also requested a broad range of material and information, much of which is readily available in the public record of the proceeding. We have a transparent rulemaking process and maintain documents in our online Electronic Comment Filing System. Also, each auction has its individual webpage; in this case, that page is located at <https://www.fcc.gov/auction/102>. I have directed my staff to assist yours in accessing this material online for review and to provide any other assistance that you need related to the Commission's spectrum work.

I stand ready to testify concerning these decisions at the April 3 hearing, and I am quite confident that the FCC has complied with all appropriate processes related to this matter.

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Ajit V. Pai



FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF
THE CHAIRMAN

April 2, 2019

The Honorable Mike Quigley
Chairman
Subcommittee on Financial Services and General Government
Committee on Appropriations
U.S. House of Representatives
2000 Rayburn House Office Building (G Floor)
Washington, DC 20515

Dear Chairman Quigley:

Thank you for your letter regarding the Commission's 24 GHz auction (Auction 102). Auction 102 began on March 14 and is ongoing with more than \$1.7 billion in gross proceeds so far. This auction will make available 700 megahertz of spectrum in the 24.25-24.45 GHz and 24.75-25.25 GHz bands for commercial 5G services and applications. I share the support you expressed in your letter for United States leadership in the deployment of 5G, the next generation of wireless connectivity, and the auction of 24 GHz spectrum is critical to that leadership.

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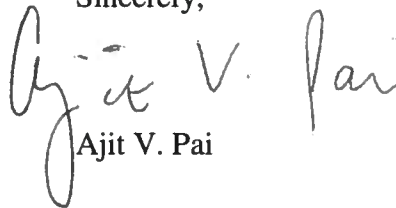
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Ajit V. Pai